Author index

compiled by Carol Smith

Abbott, Alison, Interrelationship between Na^+ and Ca^{2+} metabolism in hypertension 111
Abbott, Alison, New directions in asthma: some cause for concern 149
Abbracchio, Maria Pia, see Cattabeni, Flaminio
Advokat, Claire, The role of descending inhibition in morphine-induced analgesia 330
Ahnert-Hilger, G. and Gratzl, M., Controlled manipulation of the cell interior by pore-forming proteins 195
Akselrod, Solange, Spectral analysis of fluctuations in cardiovascular parameters: a quantitative tool for the investigation of autonomic control 6
Andrews, P. L. R., Rapeport, W. G. and Sanger, G. J., Neuropharmacology of emesis induced by anti-cancer therapy 334
Anholt, Robert, Robert Anholt replies (Letter) 86
Ariëns, E. J., Promiscuity in pharmacology (Letter) 235
Ariëns, E. J., Stereophobia: an economic afterthought (Letter) 317

Baldwin, Helen A. and File, Sandra E., Caffeine interactions with multiple neurotransmitter systems (Letter) 280
Barnes, Peter J., Minette, Philippe and Maclagan, Jennifer, Muscarinic receptor subtypes in airways 412
Bechem, Martin, Hebisch, Siegbert and Schramm, Matthias, Ca^{2+} agonists: new sensitive probes for Ca^{2+} channels 257
Becker, Cord-Michael, see Rehm, Hubert
Bevan, John A., Bevan, Rosemary D., Kite, K. and Oriowo, M. A., Species differences in sensitivity of aortae to norepinephrine are related to α-adrenoceptor affinity 87
Bevan, Rosemary D., see Bevan, John A.
Block, Lutz H. and Pletscher, A., Low-density lipoprotein – an old substance with a new function? 214
Block, Lutz H. and Pletscher, Alfred, Support for 'hormone-like' actions of LDL (Letter) 431
Bondy, Stephen C., see Komulainen, Hannu
Bowman, W. C., Marshall, I.G., Gibb, A. J. and Harborne, A. J., Feedback control of transmitter release at the neuromuscular junction 16
Boyd, F. Leslie, see Hurley, Laurence H.
Boyett, Mark R., see McCormack, James G.
Bradley, Ronald J., Prejunctional action of tubocurarine-like fade (Letter) 200
Briley, Mike, see Moret, Chantal
Briley, Mike, see Broadhurst, Andy M.
Broadhurst, Andy M. and Briley, Mike, Catecholamine and 5-HT synthesis *ex vivo* as an index of *in-vivo* neuronal activity and regulation 349
Brodersen, Rolf, Honoré, Bent, Pedersen, Anders O. and Klotz, Irving M., Binding constants for ligand–carrier complexes 252
Brown, John, Is α-ANP primarily a natriuretic hormone? 312 and 390 (errata)
Bruckdorfer, K. R., see Jacobs, M.
Buck, Stephen H., Pruss, Rebecca M., Krstenansky, John L., Robinson, Phillip J. and Stauderman, Kenneth A., A tachykinin peptide receptor joins an elite club 3
Bühler, F. R., see Scott-Burden, T.
Burnstock, G., Sympathetic purinergic transmission in small blood vessels 116
Bush, Eugene N., see Hancock, Arthur A.
Bylund, David B., Subtypes of α_2-adrenoceptors: pharmacological and molecular biological evidence converge 356

Caldwell, John, see Smith, Robert L.
Cash, Christopher D., see Vayer, Philippe
Cattabeni, Flaminio and Abbracchio, Maria Pia, Behavioural teratology: an inappropriate term for some uninterpretable effects 13
Christensen, Halvor N., Why we might as well forget pyroglutamate as an amino acid (Letter) 430
Colquhoun, David, Single channel analysis costs time (Letter) 157
Cook, Nigel S., The pharmacology of potassium channels and their therapeutic potential 21
Cook, C. Edgar and Drayer, Dennis E., Antibodies: a rich source of novel chemical agents for pharmacological studies 373
Cooper, Kelvin, Drug–receptor interactions and drug design (Letter) 51
Cooper, Steven J. and Abbott, Alison, Clinical psychopharmacology may benefit from new advances in 5-HT pharmacology 269
Couture, Réjean, see Regoli, Domenico
Cowan, Alan, New bombesin antagonist has 'encouraging profile' 1
Cowan, Kenneth H., see Vickers, Philip J.
Cramer, Richard D., III, see Marshall, Garland R.
Croft, Simon L., Recent developments in the chemotherapy of leishmaniasis 376
Cunningham, Kathryn A., see Lakoski, Joan M.

Daemen, M. J. A. P., Smits, J. F. M., Thijssen, H. H. W. and Struyker-Boudier, H. A. J., Pharmacokinetic considerations in target-organ directed drug delivery 138
DeFeudis, Francis V., Further promiscuity of phenylalkylamine Ca^{2+} antagonists (Letter) 352
Dickson, Robert B., see Vickers, Philip J.
Dion, Stéphane, see Regoli, Domenico
Docherty, Jim., O'Malley, Kevin and Waddington, John, The future for receptor classification? 385
Dolphin, A. C. and Scott, R. H., Ca^{2+} agonists/antagonists and GTP (Letter) 394
Donné-Op den Kelder, Gabriëlle, Distance geometry: a tool in receptor mapping 391
Dragunow, M. and Robertson, H. A., Seizure inducible c-fos protein(s) in mammalian neurons 5
Dragunow, M. and Faull, R. L. M., Neuroprotective effects of adenosine 193
Drapeau, Guy, see Regoli, Domenico
Drayer, Dennis E., see Cook, C. Edgar
Dreher, Martin L. and Hanley, Michael R., Multiple modes of protein kinase C regulation and their significance in signalling 114
Dreyer, M. and Rüdiger, H. W., Genetic defects of human receptor function 98
Dunwiddie, T. V., see Fredholm, B. B.

Ebeigbe, Anthony B. and Ezimokhai, M., HUMANS V. ANIMALS: Vascular smooth muscle responses in pregnancy-induced hypertension 455
Edeson, Robert O., see Madsen, Barry W.
Ehlert, Frederick J., Energetics of conformational changes in receptors (Letter) 393
Elliott, Jim, Protein pockets and anaesthesia (Letter) 10
Elliott, Henry, The influence of clinical adrenoceptor antagonism on plasma lipid profiles 439
Ellory, J. Clive, see Hendry, Bruce M.
Ezimokhai, M., see Ebeigbe, Anthony B.

Faull, R. L. M., see Dragunow, M.
Feely, Morgan, see Haigh, Jeremy R. M.
File, Sandra E., see Baldwin, Helen A.
Florip, Mark G. and Jakowlew, Sonia B., Pathophysiology of platelets (Letter) 314
Fowler, Christopher J., Validity of human brain autopsy samples for characterizing neurotransmitter function 232

Fredholm, B. B. and Dunwiddie, T. V., How does adenosine inhibit transmitter release? 130
Fredholm, B. B. and Dunwiddie, T. V., Fredholm and Dunwiddie reply (Letter) 280
Freissmuth, Michael, see Schütz, Wolfgang

Galloway, Matthew P., Neurochemical interactions of cocaine with dopaminergic neurons 451
García-Sáinz, J. Adolfo, 'Inhibitory' receptors and ion channel effectors 271
Garner, Andrew, see Whittle, Brendan J. R.
Gaskell, Simon J., Liquid secondary ion MS: an emerging technique 119
Geiger, J. D., see Westerberg, V. S.
Georgiev, Vassil St., New synthetic immunomodulating agents 446
Gerskowitch, V. Paul, Hull, Robert A. D. and Shankley, Nigel P., The 'pharmacological toolmaker's' rational guide to drug design: an appreciation of Sir James Black 435
Gibb, A. J., Alasdair Gibb replies (Letter) 201
Gibb, A. J., see Bowman, W. C.
Giner-Sorolla, Alfredo, The excitement of a suspense story, the beauty of a poem: the work of Hitchings and Elion 437
Godfraind, T., Morel, N. and Wibo, M., HUMANS V. ANIMALS: Tissue specificity of dihydropyridine-type calcium antagonists in human isolated tissues 37
Gonzales, Rueben A., see Raeburn, David
Gottesman, Michael M. and Pastan, Ira, Resistance to multiple chemotherapeutic agents in human cancer cells 54
Gratzl, M., see Ahnert-Hilger, G.

Haigh, Jeremy R. M. and Feely, Morgan, Tolerance to the anticonvulsant effect of benzodiazepines 361
Hancock, Arthur A., Bush, Eugene N., Stanisic, Dusanka, Kyncl, John J. and Lin, C. Thomas, Data normalization before statistical analysis: keeping the horse before the cart 29
Hanley, Michael R., see Dreher, Martin L.
Harborne, A. J., see Bowman, W. C.
Harrold, Marc, see Miller, Duane D.
Hauel, Norbert, van Meel, J. C. A. and Wetzl, Bernd, Hauel *et al.* reply (Letter) 432
Hauel, Norbert, see Wetzel, Bernd
Haynes, Laurie, Opioid receptors and signal transduction 309
Hebisch, Siegbert, see Bechem, Martin
Hendry, Bruce M. and Ellory, J. Clive, Molecular sites for diuretic action 416
Heyman, Julius S., Vaught, Jeffry L., Raffa, Robert B. and Porreca, Frank, Can supraspinal δ-opioid receptors mediate antinociception? 134
Hitzemann, Robert, Thermodynamic aspects of drug–receptor interactions 408
Hoffman, Brian B. see Reaven, Gerald M.
Hollenberg, M. D., Valentine-Braun, K. A. and Northup, J. K., Protein tyrosine kinase substrates: Rosetta stones or simply structural elements? 63
Honoré, Bent, see Brodersen, Rolf
Hoyer, Daniel, Molecular pharmacology and biology of 5-HT_{1C} receptors 89
Hull, Robert A. D., see Gerskowitch, V. Paul
Hurley, Laurence H. and Boyd, F. Leslie, DNA as a target for drug action 402

Insel, Paul A., Phenylalkylamines are promiscuous receptor blockers (Letter) 10
Itagaki, Kiyoshi, see Vaghy, Pal L.
Izquierdo, Ivan, The making and shaking of memories 79
Izquierdo, Ivan, Now you'll start yawning and you won't know why 119
Izquierdo, Ivan, How environment affects conditioned drug tolerance 195
Izquierdo, Ivan, ACTH(4–10) and the neuromuscular junction 230
Izquierdo, Ivan, The amygdala and the Prince of Denmark 429

Jacobs, M. and Bruckdorfer, K. R., Is low-density lipoprotein hormone-like? (Letter) 235
Jacobs, M., L-Arginine is endogenous source of NO 312
Jakowlew, Sonia B., see Florip, Mark G.
Jewell, Brian R., see McCormack, James G.
Johnston, G. A. R., see Lloyd, H. G. E.

Karnezis, Tom A. and Murphy, Michael B., Dopamine receptors and intraocular pressure 389
Katusic, Zvonimir S., see Vanhoutte, Paul M.
Kenakin, Terry P., see Morgan, Paul H.
Kite, K., see Bevan, John A.
Klotz, Irving M., see Brodersen, Rolf
Koelle, George B., Enhancement of acetylcholinesterase synthesis by glycyl-L-glutamine: an example of a small peptide that regulates differential transcription? 318
Komulainen, Hannu and Bondy, Stephen C., Increased free intracellular Ca^{2+} by toxic agents: an index of potential neurotoxicity? 154
Krstenansky, John L., see Buck, Stephen H.
Kyncl, John J., see Hancock, Arthur A.

Lakoski, Joan M. and Cunningham, Kathryn A., Cocaine interaction with central monoaminergic systems: electrophysiological approaches 177
Langston, J. W., Neuromelanin-containing neurons are selectively vulnerable in parkinsonism 347
Leff, Paul, Analysis of agonist action using the operational model 395
Lentz, Thomas L., Binding of viral attachment protein to host-cell receptor: the Achilles heel of infectious viruses 247
Lin, C. Thomas, see Hancock, Arthur A.
Lloyd, H. G. E., Spence, I. and Johnston, G. A. R., Synaptic depression and adenosine (Letter) 352
Loose-Mitchell, David S., Antisense nucleic acids as a potential class of pharmaceutical agents 45
Luscher, Thomas F. and Vanhoutte, Paul M. HUMANS V. ANIMALS: Endothelium-dependent responses in human blood vessels 181
Lutz, W. K. and Maier, P., Genotoxic and epigenetic chemical carcinogenesis: one process, different mechanisms 322
Lutz, Michael W., see Morgan, Paul H.

Mackay, Dennis, A generally useful modification of ALLFIT that facilitates the fitting of null equations to dose–response curves 121
Mackay, Dennis, Continuous variation of agonist affinity constants (Letter) 156
Mackay, Dennis, Concentration–response curves and receptor classification: null methods or operational model? 202
Maclagan, Jennifer, see Barnes, Peter J.
Madsen, Barry W. and Edeson, Robert O., Nicotinic receptors and the elusive β (Letter) 315
Maier, P., see Lutz, W. K.
Maitre, Michel, see Vayer, Philippe
Malbon, Craig C., Rapiejko, Peter J. and Watkins, David C., Permissive hormone regulation of hormone-sensitive effector systems 33
Manuel, Janine M., see Paton, David M.
Marley, Phillip D., Desensitization of the nicotinic secretory response of adrenal chromaffin cells 102
Marsden, Charles A., see Ward-Routledge, Carol
Marshall, Garland R. and Cramer, Richard D., III, Three-dimensional structure-activity relationships 285
Marshall, I. G., see Bowman, W. C.
Martin, Michael and Resch, Klaus, Interleukin 1: more than a mediator between leukocytes 171
Mašek, Karel, Immunopharmacologists forge interdisciplinary links 225
Max, B., This and that: on transport and translation 48
Max, B., This and that: clots, creamers and canals 122
Max, B., This and that: deception and the stuff of dreams 198
Max, B., This and that: an odorless crime and the mystery of a poet's heart 276
Max, B., This and that: thanatomimetics, bradychronotoxins, osmocides and ototoxins 353
Max, B., This and that: neither epinephrine nor adrenaline 432
Maxfield, Frederick R., see Yamashiro, Darrell J.
McCormack, James G., Boyett, Mark R., Jewell, Brian R. and Orchard, Clive H., Ion movement and contractility in heart cells 343
McGrath, John and Wilson, Vincent, α-Adrenoceptor subclassification by classical and response-related methods: same question, different answers 162
McKenna, Edward, see Vaghy, Pal L.
Melchiorre, Carlo, Polymethylene tetramines: a new generation of selective muscarinic antagonists 216
Middlemiss, D. N., Receptor-mediated control of neurotransmitter release from brain slices or synaptosomes 83
Miller, David J., May the force be with you (Letter) 124
Miller, Duane D., Harrold, Marc, Wallace, Raye Ann, Wallace, Lane J. and Uretsky, Norman J., Dopaminergic drugs in the cationic form interact with D_2 dopamine receptors 282
Minette, Philippe, see Barnes, Peter J.
Morel, N., see Godfraind, T.
Moret, Chantal and Briley, Mike, The 'forgotten' amino acid pyroglutamate (Letter) 278
Morgan, Paul H., Lutz, Michael W. and Kenakin, Terry P., K_{rax} as parameter for classification (Letter) 351
Müller-Schweinitzer, Else, HUMANS V. ANIMALS: Cyropreservation: a useful technique for storing tissues for pharmacological investigations 221
Murphy, Michael B., see Karnezis, Tom A.

Nanoff, Christian, see Schütz, Wolfgang
Nichols, Andrew J. and Ruffolo, Robert R., Jr, The relationship of α-adrenoceptor reserve and agonist intrinsic efficacy to calcium utilization in the vasculature 236
Northup, J. K., see Hollenberg, M. D.
Nowak, Jerzy, The isolated retina as a model of the CNS in pharmacology 80
Nutt, David, Benzodiazepine terminology (Letter) 86

Ogg, Graham D., Pharmacokinetic parameter estimation with a hand-held programmable calculator 85
O'Malley, Kevin, see Docherty, Jim
Orchard, Clive H., see McCormack, James G.
O'Regan, Michael H., see Phillis, John W.
Oriowo, M. A., see Bevan, John A.
Owen, P. Jane, see Plevin, Robin

Packard, Christopher J., see Shepherd, James
Page, C. P., The involvement of platelets in non-thrombotic processes 66
Pastan, Ira, see Gottesman, Michael M.
Paton, David M. and Manuel, Janine M., Mechanisms of action of the new cardiotonic drugs (Letter) 431
Peatfield, Richard, FOCUS ON DISEASE: Drugs and the treatment of migraine 141
Pedersen, Anders O., see Brodersen, Rolf
Phillis, John W. and O'Regan, Michael H. Benzodiazepine interaction with adenosine systems explains some anomalies in GABA hypothesis 153
Phillis, John W. and O'Regan, Michael H., Phillis and O'Regan reply (Letter) 281
Pletscher, Alfred, see Block, Lutz H.
Plevin, Robin and Owen, P. Jane, Multiple B_2 kinin receptors in mammalian tissues 387
Porreca, Frank, see Heyman, Julius S.
Pruss, Rebecca M., see Buck, Stephen H.

Raeburn, David and Gonzales, Rueben A., CNS disorders and calcium antagonists 117
Raffa, Robert B., see Heyman, Julius S.
Rägo, Lembit, see Zilmer, Mihkel
Rapeport, W. G., see Andrews, P. L. R.
Rapiejko, Peter J., see Malbon, Craig C.
Reaven, Gerald M. and Hoffman, Brian B., Abnormalities of carbohydrate metabolism may play a role in the etiology and clinical course of hypertension 78
Regoli, Domenico, Drapeau, Guy, Dion, Stéphane, and Couture, Réjean, New selective agonists for neurokinin receptors: pharmacological tools for receptor characterization 290
Rehm, Hubert, and Becker, Cord-Michael, Interpreting non-competitive inhibition (Letter) 316
Resch, Klaus, see Martin, Michael
Ribeiro, J. A. and Sebastião, A. M., Subtypes of adenosine receptors (Letter) 279
Robertson, H. A., see Dragunow, M.
Robinson, Phillip J., see Buck, Stephen H.
Rüdiger, H. W., see Dreyer, M.
Ruffolo, Robert R., Jr, see Nichols, Andrew J.

Sanger, G. J., see Andrews, P. L. R.
Scholfield, C. N., Molecular mechanisms of general anaesthetic action? (Letter) 11
Schramm, Matthias, see Bechem, Martin
Schrör, Karsten and Verheggen, Raphaela, HUMANS V. ANIMALS: Use of human post-mortem cerebral blood vessels to study vasospasm 71
Schütz, Wolfgang, Nanoff, Christian and Freissmuth, Michael, The fallacy of non-selectivity of radioactive ligands 261
Schwartz, Arnold, see Vaghy, Pal L.
Schweigerer, Lothar, Basic fibroblast growth factor as a wound healing hormone 427
Scott, R. H., see Dolphin, A. C.
Scott-Burden, T. and Bühler, F. R., Regulation of smooth muscle proliferative phenotype by heparinoid–matrix interactions 94
Sebastião, A. M., see Ribeiro, J. A.
Shankley, Nigel P., see Gerskowitch, V. Paul
Shepherd, James and Packard, Christopher J., Pharmacological approaches to the modulation of plasma cholesterol 326
Sinclair, John David, Multiple t-tests are appropriate in science (Letter) 12
Singer, Ernst A., Transmitter release from brain slices elicited by single pulses: a powerful method to study presynaptic mechanisms 274
Skidgel, Randal A., Basic carboxy-peptidases: regulators of peptide hormone activity 299
Sleight, Peter, Early intravenous β-adrenoceptor blockade for victims of heart attack 52
Smith, Robert L. and Caldwell, John, Racemates: towards a New Year resolution? 75
Smits, J. F. M., see Daeman, M. J. A. P.
Spence, I., see Lloyd, H. G. E.
Stamford, Jonathan A., Peer review: time for a change? (Letter) 234
Stanisic, Dusanka, see Hancock, Arthur A.
Stauderman, Kenneth A., see Buck, Stephen H.
Struyker-Boudier, H. A. J., see Daemen, M. J. A. P.
Sugimura, Takashi, New environmental carcinogens in daily life 205

Taberner, Peter V., Pharmacokinetics of alcohol and the law 47
Tallarida, Ronald J., The widespread use of the geometric mean (Letter) 158
Taylor, Colin W., Time and space – novel aspects of hormone action 43
Taylor, Stephen G. and Weston, Arthur, Endothelium-derived hyperpolarizing factor: another endogenous inhibitor from the vascular endothelium 272
Thijssen, H. H. W., see Daemen, M. J. A. P.
Tomlinson, George, Inhibition of radioligand binding to receptors: a competitive business 159
Tomlinson, George, George Tomlinson replies (Letter) 317
Tortella, Frank C., Endogenous opioid peptides and epilepsy: quieting the seizing brain? 366

Uretsky, Norman J., see Miller, Duane D.

Vaghy, Pal L., McKenna, Edward, Itagaki, Kiyoshi and Schwartz, Arnold, Resolution of the identity of the Ca^{2+}-antagonist receptor in skeletal muscle 398
Valentine-Braun, K. A., see Hollenberg, M. D.
van Bladeren, Peter J., Formation of toxic metabolites from drugs and other xenobiotics by glutathione conjugation 295
van Heuven-Nolsen, Dicky, 5-HT receptor subtype-specific drugs and the cardiovascular system 423
van Meel, J. C. A., see Hauel, N.
Vanhoutte, Paul M. and Katusic, Zvonimir S., Endothelium-derived contracting factor: endothelin and/or superoxide anion? 229
Vanhoutte, Paul M., see Luscher, Thomas F.
Vaught, Jeffry L., see Heyman, Julius S.
Vayer, Philippe, Cash, Christopher D. and Maitre, Michel, Is the anticonvulsant mechanism of valproate linked to its interaction with the cerebral γ-hydroxybutyrate system? 127
Verheggen, Raphaela, see Schrör, Karsten
Vickers, Philip J., Dickson, Robert B. and Cowan, Kenneth H., A pleiotropic response associated with resistance of breast cancer cells to antineoplastic drugs and hormonal agents 443

Waddington, John, see Docherty, Jim
Walaas, S. Ivar and Walaas, Otto, Second messengers identified for insulin? 151
Walaas, Otto, see Walaas, Ivar S.
Wallace, Raye Ann, see Miller, Duane D.
Wallace, Lane J., see Miller, Duane D.
Wallis, Robert B., Hirudins and the role of thrombin: lessons from leeches 425
Ward, Stephen A., Mechanisms of chloroquine resistance in malarial chemotherapy 241
Ward-Routledge, Carol and Marsden, Charles A., Adrenaline in the CNS and the action of antihypertensive drugs 209
Watkins, David C., see Malbon, Craig C.
Watling, Keith J., Radioligand binding studies identify 5-HT_3 recognition sites in neuroblastoma cell lines and mammalian CNS 227
Weiss, Bernard, Neurobehavioral toxicity as a basis for risk assessment 59
Wessler, Ignaz, Neurotransmission at the NMJ (Letter) 125
Westerberg, V. S. and Geiger, J. D., Adenosine and gastric function 345
Weston, Arthur, see Taylor, Stephen G.
Wetzel, Bernd and Hauel, Norbert, New cardiotonic agents – a promising approach for treatment of heart failure 166
Wetzl, Bernd, see Hauel, Norbert
Whittle, Brendan J. R. and Garner, Andrew, New targets for anti-ulcer drugs 187
Wibo, M., see Godfraind, T.
Wilson, Vincent, see McGrath, John

Yamashiro, Darrell J. and Maxfield, Frederick R., Regulation of endocytic processes by pH 190

Zilmer, Mihkel and Rägo, Lembit, Does biology duplicate itself? (Letter) 86

Subject Index

compiled by Sara Firman

Alphabetic order is word-by-word, ignoring Greek symbols and chemical prefixes. In addition to main subjects of articles, passing mentions of particular and current interest are indexed. Page numbers given refer to the page of an article where the subject is first mentioned. For alphabetic consistency American spelling has been adopted in the index, although English spelling will be found in articles by British authors. Letters relating to a previous article are indicated by linking article page no. and letter page no. with 'and'; (Letter) appears after the relevant page number.

Acetylcholine
  and chromaffin cells 105
  endothelial responses 181, 272
  and prejunctinal nicotinic receptors 16 and 125 (Letter)
  in the retina 80
  and secretion 259, 345
  studies on brain autopsy samples 233
Acetylcholine receptors: genetic defects 98
Acetylcholinesterase (AChE): synthesis 318
Aconitine 103
Acquired immune deficiency syndrome (AIDS) 438, 446
Acrylamide 60
Actinomycin D
  and DNA 403
  and emesis 337
  resistance to 54
ADA 202–718 446
Adenine arabinoside 438
Adenosine
  and benzodiazepines 153 and 280 (Letter)
  and gastric function 345
  and neuroprotection 193 and 352 (Letter)
  and neurotransmission 130
  as vasodilation standard 73
Adenosine diphosphate *see* ADP
Adenosine receptors
  and neurotransmitter release 130
  subtypes 279 (Letter), 345
Adenosine triphospate *see* ATP
S-Adenosylmethionine 324
Adenovirus 249
Adenylate cyclase: and 'permissive' hormone action 33
ADP: and endothelium-dependent relaxation 183
Adrenaline
  and antihypertensive drugs 209
  and emesis 336
  and low-density lipoprotein receptor 441
  in the retina 80
  use of term 432
β-Adrenergic radioligands 263
Adrenoceptors: classification 356
α-Adrenoceptor agonists 236, 350
α-Adrenoceptor antagonists
  and lipid metabolism 439
  and neurotransmitter release 274, 350
α-Adrenoceptors
  Ca^{2+} mobilization 236
  DNA cloning (α_2) 356
  reserve 236
  subclassification 87, 162, 356, 386
β-Adrenoceptor agonists
  and asthma 149
  and HMG CoA reductase 440
β-Adrenoceptor antagonists
  clinical trials 52
  and migraine 143
  and plasma lipid profiles 439
β-Adrenoceptors
  affinity states 392
  binding thermodynamics 408
  genetic defects (β_2) 98
  human cardiac function 386
  radioligand binding studies 263
  subclassification 356, 386
Adrenocorticotropic hormone (ACTH): segment(4–10) 230
Adrenocorticotropin 259
Adriamycin *see* doxorubicin
AF-DX 116 413
Aflatoxin B_1 206
Aggression: and 5-HT 270
Agonist affinity constants 87 and 156, 351 (Letters)
Albumin: ligand binding 252
Alcohol: pharmacokinetics 47
Alcoholism: and Ca^{2+} antagonists 118
Aldosterone 259
Alkylating agents 322
3-*n*-Alkylcatechols (urushiol) 49
Alkylhalides 322
Alkylsulfonates 322
Allergic inflammation: platelets in 67
Allopurinol 379, 438
Allylamines 379
S-Allyl (equatorial)-morphinan 310
Alzheimer's disease
  and ACTH(4–10) 230
  autopsy studies 233
  and basic fibroblast growth factor (bFGF) 428
Amiloride 416
Amines: transport 49
Amino acids
  correct formula 430 (Letter)
  and secretion 259
  transport 49
Amitriptyline: and migraine 144
Amodiaquine 243
Amphetamines
  immunoassay for 374
  tolerance of 195
Amphotericin B 378
Amrinone 167 and 431 (Letter)
Amygdala 429
Amygdalin 277
Analgesia *see* antinociception
Anesthetics *see* general anesthetics; local anesthetic (cocaine)
Angina 435
  and K^+ channel openers 21
Angiogenesis: and basic fibroblast growth factor (bFGF) 428
Angiotensin II 27, 455
Angiotensin-converting enzyme (ACE) inhibitors 287
Annexins 226
Antacids 188
Anti-amnesic drugs 79
Antibodies 373
Anticancer drugs 402, 437
Anticholinergic drugs 150
Anticonvulsant drugs 127
Anti-emetic drugs 334
Anti-estrogens 443
Antihypertensive drugs 209
Antimalarial drugs 438, 450
Antimonials, pentavalent 376
Antinociception (analgesia)
  and Ca^{2+} antagonists 118
  morphine-induced 330
  and opioid receptors 134
Antisecretory drugs 188
Antisense nucleic acids: in drug design 45
Anti-ulcer drugs 187
Anxiolytics 269
Apomorphine: and emesis 336
APV 193
Arachidonate: mobilization 235 (Letter)
Arylhydrocarbon hydroxylase 444
Asbestos fibres 324
Aspartate 80
Aspirin
  and arterial thrombi 122
  intolerance of 67
  and migraine 143
Asthma
  and β-adrenoceptor agonists 149

and muscarinic receptors 412
and receptor defects 98
Atenolol 52
and migraine 143
Atherosclerosis
and adrenoceptor antagonists 439
and cholesterol 327
and heparinoid–matrix interactions 95
ATP: and endothelium-dependent responses 181
ATP receptors (P_2 purinoceptors) 116
ATPase *see* Na^+/K^+-transporting ATPase
Atrial natriuretic peptide (ANP) 259, 312 and 390 (errata)
Atropine 353
Autoimmune diseases: and immunomodulating drugs 446
Autopsy samples, human: and neurotransmitters 84, 232, 349
Azathioprine 438
Azepexole 350
Azepines 212
Azidopine 56
N-(*p*-azido-3-[^{125}I]salicyl)-*N'*-(β-aminoethyl) vindesine 55
Azimexone 446
Azoles 379

B cells 226
Barbiturates 362
Basic fibroblast growth factor (bFGF) 427
Batrachotoxin 103
BAY K 8644 257
BCNU (1, 3-bis-(2-chloroethyl)-1-nitrosurea): i.a. delivery 139
Behavioral teratology 13
Behavioral toxicity 59
Bendroflumethiazide 417
Benzafibrate 328
Benzo[*a*]pyrene 206, 322, 443
Benzodiazepine receptors
ligand terminology 86 (Letter)
peripheral 86 (Letter)
Benzodiazepines
anticonvulsant effect 361
and anxiety 270
and emesis 338
and GABA hypothesis 153 and 280 (Letter)
Benzothiazepines 398
BHC-9C 217
B-HT 958 275
Bicuculine 371
Binding constants 252
Binding energy 51 (Letter)
Binding sites: distance geometry 391
Biological response modifiers 449
Bites, human 48
Black, Sir James: 1988 Nobel Prize for Physiology and Medicine 435
Bleomycin 403
β-Blockers *see* β-adrenoceptor antagonists
Blood coagulation 122
Bombesin: nomenclature 2
Bombesin receptor antagonists 1
Bradychronotoxins 353
Bradykinin: and endothelium-dependent relaxation 183
Bradykinin receptor antagonist (NPC 567): and asthma 150
Bradykinin receptors 387
Brain slices: neurotransmitter release 83, 274
Brain synaptosomes: neurotransmitter release 83
BRL 34915 (chromakalim) 23, 273
BRL 43694 338
8-Bromoguanosine 450
Bronchodilators 412
Bropirimine 446
Bumetamide 416
α-Bungarotoxin 16 and 125, 200 (Letters)
Burimamide 435
Buspirone 269
Butyrylcholinesterase (BuChE) 318

Ca^{2+}
cytosolic oscillations 43
as index of neurotoxicity 154
and preeclampsia 456
Ca^{2+} agonists 257
Ca^{2+} antagonist receptors 398
Ca^{2+} antagonists
and α-adrenoceptors 236
and CNS disorders 117
and drug resistance 55, 244
and migraine 143
tissue specificity 37
Ca^{2+} channels: and 'inhibitory' receptors 271, 398
Ca^{2+} metabolism: and hypertension 111
Ca^{2+} -sensitizers 168
Ca^{2+} transport: mitochondrial 344
Caffeine: and benzodiazepines 153 and 280 (Letter)
Calcimycin (A23187) 104, 182
Calcitonin 259
Calcitonin gene-related peptide: and endothelium-dependent relaxation 181
Calelectrin 65
Calpactins 64
Campylobacter pylori: and peptic ulcers 187
Cancer cells: multidrug resistance 54
Cancer chemotherapy
and emesis 334
and immunomodulating drugs 446
intra-arterial delivery 139
multidrug resistance 54
Cannabinoids 270, 334
Carbamazepine 362
Carbohydrate metabolism: and hypertension 78
Carbonic anhydrase inhibitors 418
Carboxypeptidases, basic 299
Carcinogens
environmental 205
genotoxic/epigenetic 322
Cardiac dysrhythmias: and K^+ 21
Cardiac glycosides 166
Cardiotonic drugs 166 and 431 (Letter)
Cardiovascular pharmacology 6
Carrageenans 94
Catecholamines
and ninotinic stimulation 102
regulation by 'permissive' hormones 33
and secretion 259
synthesis as drug assay 349
CC-1065 405
β-CCM (β-carboline-3-carboxylic acid methyl ester) 153
cDNA cloning: of 5-HT receptor 92
Central nervous system
disorders and Ca^{2+} antagonists 117
isolated retina as model 80
Cerebral vasospasm: *in-vitro* model 71
c-fos protein, seizure-inducible 5
CGP 28–392 257
Chemical imprinting 13
Chemoreceptors: and emesis 336
Chemotherapy *see* cancer chemotherapy; leishmaniasis: chemotherapy
Chirality (stereoisomerism)
of drugs 373
of promiscuous receptor blockers 235, 352 (Letters)
regulatory guidelines 75 and 317 (Letter)
Chlordiazepoxide 361
Chloroform 324
Chloromethine: and emesis 336
m-Chlorophenylpiperazine 270
Chloroquine resistance 241
Chlorothiazide 416
Chlorpromazine 358
Cholesterol 326
see also hypercholesterolemia
Chromaffin cells
exocytosis 196
nicotinic secretory response 102
Chromobindins 65
Chromakalim (BRL 34915) 23, 273
Ciclohexamide 337
Cigarette smoke 205
Cimetidine: discovery 435
Cisapride 339
Cisplatin
and DNA 403
and emesis 270, 336
intra-arterial delivery 139
Clinical trials: size 52
Clobazam 362
Clofibrate 323, 328
Clomipramine 270, 350, 381
Clonazepam 361
Clonidine 87, 212, 272, 275, 350, 358
Clotrimazole 380
Coagulation, blood 122
Cocaine
addiction 454
and dopamine 177, 451
Codeine: and migraine 143
Colcemid 323
Colchicine: resistance to 54
Colestipol 329
Colestyramine 329
Co-localization *see* co-transmission
Competition binding experiments 159 and 316 (Letter), 261, 393 (Letter)
Computer modelling: receptors 238
Concentration–response curves *see* dose–response curves
Congestive heart failure
and Ca^{2+} agonists 261
cardiotonics 166
and K^+ channel openers 21
Coronary heart disease
and adrenoceptor antagonists 439
and cholesterol 326
Cortisone receptors: genetic defects 99
Co-transmission (co-localization) 164, 212
Creamers, coffee 124
Crohn's disease: and immunomodulating drugs 446
Cromoglicate
and asthma 150
and platelets 67
Cryopreservation 221
Curve-fitting (concentration–response) 121, 204
Cyanide 276
Cyclohexyladenosine (CHA)
and adenosine A_1 receptors 130
and neuroprotection 193
Cyclooxygenase 230
Cyclophosphamide
and DNA 403
and emesis 336
Cypridime 310
Cyproheptadine 424
Cytokines 173, 226
Cytoprotection 188
Cytosine arabinoside 438

DAGO (enkephalin) 135
4-DAMP 413
Dapsone 381
DARPP-32 233, 390
Daunomycin 54, 244
Daunorubicin 54
Dazoxiben 122
DDT 325
Defense mechanisms, non-allergic: platelets in 66
Deoxycoformycin 438
Depression: and 5-HT 26
Desensitization
of nicotinic secretion 102
radioligand binding studies 393 (Letter)
dexamethasone 35, 270, 334

Diabetes: genetic defects of receptor function 100
2,6-Diaminopurine 437
Diaminopyrimidines 381
Diazepam 361
Diazoxide 22
1,2-Dibromomethane 296
Dichloroisoprenaline 435
Diet: and cancer 205
Di(2-ethylhexyl)phthalate 323
Diethylstilbestrol 324
Digitalis-like substance, endogenous 112
Digoxin 374
Dihydroergotamine: and migraine 143
Dihydrofolate reductase (DHFR) 285
Dihydromorphine 409
Dihydropyridines (DHPs) 257
  in the brain 117
  in skeletal muscle 398
  tissue specificity 37
Diltiazem 56
Diprenorphine 410
Distance geometry 391
Diuretics 416
DNA: target for drugs 402
Domperidone: and migraine 143
Dopamine
  and adenosine 130
  analogs (charged/uncharged) 282
  and cocaine 177, 451
  in the retina 80
  and secretion 259
  studies on brain autopsy samples 232
Dopamine autoreceptors 453
Dopamine (D_2) receptor agonists 272, 408
Dopamine (D_2) receptor antagonists 334, 408
Dopamine receptors
  and ageing 386
  in autopsy samples 233
  binding thermodynamics (D_2) 408
  and cocaine 451
  and glaucoma (DA_1, DA_2) 389
  structure–activity relationships (D_2) 282
Dose–response curves
  ALLFIT program 121
  receptor classification 202
Down syndrome: and immunomodulating drugs 446
Doxorubicin (adriamycin)
  and emesis 54, 337
  resistance to 403
8-OH-DPAT 350
DPI201-106 169
Drug delivery: pharmacokinetics 138
Drug design
  binding energy 51 (Letter)
  oligonucleotides 45
Drug–receptor interactions: thermodynamics 408
Drug receptor theory 240
Drug resistance
  in cancer 54
  chloroquine 241
Drug tolerance 195
Drug toxicity 373
DSLET (enkephalin) 135

Ebashi bag 123
EGF–URO *see* epidermal growth factor–urogastrone
Eledoisin 290
Elion, Gertrude: 1988 Nobel Prize for Physiology and Medicine 435
Emesis 334
Emetine 337
Endocytosis: effects of pH 190
Endogenous opioid anticonvulsant substance (EAS) 366
Endonexin 65
Endorphins: and γ-hydroxybutyrate 129
β-Endorphins 79, 311, 319, 429
Endosomes: acidification of 190
Endothelin 229
Endothelium-dependent contracting factors (EDCF) 181, 229
Endothelium-derived hyperpolarizing factor (EDHF) 272
Endothelium-derived relaxing factor (EDRF) 181, 229, 259, 272, 312
Enkephalins
  processing 300
  see also DAGO; DSLET; [Leu]enkephalin
Enoximone 167
Ephedrine 374
Epidermal growth factor (EGF) 427
Epidermal growth factor (EGF) receptors 443
Epidermal growth factor–urogastrone (EGF–URO): and gastrointestinal disease 189
Epidermal growth factor–urogastrone (EGF–URO) receptors: substrates 63
Epilepsy
  and benzodiazepines 361
  and opioid peptides 366
Epinephrine
  in the amygdala 429
  use of term 432
Epoxides 322
Epstein–Barr virus 249
Erabutoxin b (snake toxin) 17, 200 (Letter)
Ergotamine: and migraine 143
Estrogen receptors 443
Estrone 324
Ethosuximide 127, 362
Etorphine 410
Exocytosis 196

Fenamates: and migraine 143
Fenofibrate 328
Ferriprotoporphyrin IX: and chloroquine resistance 242
Fever: and interleukin 1 173
Flesinoxan 424
Flumazepil (Ro 15-1788) 153
Flunarizine
  anticonvulsant properties 117
  and migraine 143
Flunitrazepam 408
Fluorouracil 438
  and DNA replication 323
  intra-arterial delivery 139
Fluoxetine 270, 350
Follicle-stimulating hormone (FSH) receptors: genetic defects 99
Frusemide 416
β-Funaltrexamine (β-FNA) 136, 867
Furosemide *see* frusemide
Furtramine 217

G proteins
  and adenosine A_1 receptors 130
  in exocytosis 196
  and insulin 151
  and K^+/Ca^{2+} channels 271
  and 'permissive' hormone regulation 33
GABA
  and adenosine 130
  and benzodiazepines 153
  in the retina 80
  studies on brain autopsy samples 232
Gallamine 413
Gallopamil: enantiomers 352
Gastric antisecretory agents 187
Gastric protective agent (adenosine) 345
Gastric ulceration 346
Gastrin: and emesis 336
Gastrin antagonists 189
Gastrin receptors: genetic defects 99
Gastrin releasing peptide (GRP) 2
Gene amplification 323
General anesthetics: molecular mechanisms 10, 11 (Letters)
Geometric mean 158 (Letter)
Glaucoma: and dopamine receptors 389
Glibenclamide 344
Glomerulonephritis 173
Glucocorticoids 33
Glutamate
  and adenosine 130
  in the retina 80
  and secretion 259
  studies on brain autopsy samples 233
Glutathione conjugation 295
Glutathione-*S*-transferase 444
Glycine 80
Glycosides 355
  see also P-glycosides
Glycoproteins *see* P-glycoproteins
Glycyl-L-glutamine 318
GR38032F 227, 338
GR43175: and migraine 143, 424
GR65630 227
Growth hormone (GH)
  genetic defects of receptor function 100
  and secretion 259
Guanabenz 212, 350
Guanfacine 212

H160/51 257
Haemozoin 242
Halofantrine 245
Hashimoto's disease 99
Heart failure *see* congestive heart failure; myocardial infarction
Hebenon 353
Hemicholinium 19 and 125, 200 (Letters)
Hemlock 353
Hemodynamic analysis 6
Hemostasis: role of thrombin 427
Heparin
  and cell proliferation 94
  and venous thrombi 122
Heparin sulfate: and cell proliferation 94
Heparinoid–matrix interactions 94
Hepatitis B virus 249
Heroin 374
α-Hexachlorocyclohexane 325
Hexahydrosiladifenidol 414
Hexamethonium 16 and 125 (Letter)
Hirudins 425
Histamine
  and asthma 149
  and emesis 336
  and endothelium-dependent relaxation 183
  in the retina 80
  and secretion 259, 345
Histamine H_2 receptor antagonists 187
Hitchings, George: 1988 Nobel Prize for Physiology and Medicine 435
HMG-CoA reductase 328, 440
Hormone-resistant diseases 98
Hormones
  'permissive' 33
  see also peptide hormones
  see also named entries
5-HT
  and adenosine 130
  in brain tissue 83, 233
  and cocaine 177
  and emesis 336
  and endothelium-dependent responses 181
  and hypertension 424
  and migraine 141, 424
  and phenylalkamines 352
  and psychiatric disorders 269
  in the retina 80
  and secretion 259
  synthesis as drug assay 349
  as vasoconstrictor 72
5-HT_1 receptor agonists
  and anxiety 270
  and migraine 143, 424
5-HT_3 receptor antagonists 143, 227, 270, 334
5-HT receptors: cDNA cloning 92, 356

5-HT_{1C} receptors 89
5-HT_2 receptors 89
5-HT_3 receptors 227
Human autopsy samples
and cerebral vasospasm 71
and neurotransmitters 84, 232, 349
Human cytomegalovirus 249
Human immunodeficiency viruses (HIV) 247
Human receptor defects 98
Human rhinovirus 14, 249
Human T-cell leukemia virus 249
Human tissues: cryopreservation 221
Human v. Animals Series
cryopreservation 221
endothelium-dependent responses in blood vessels 181
post-mortem cerebral blood vessels and vasospasm 71
tissue selectivity 37
Hydrochlorothiazide 417
γ-Hydroxybutyrate (GHB) 127
12-Hydroxyeicosatetraenoic acid (12-HETE) 314 (Letter)
2-Hydroxyethyl disulfide (HEDS) 448
3-Hydroxy-3-methyl glutarate 328
4-Hydroxytamoxifen 444
5-Hydroxytryptamine *see* 5-HT
Hyocyamine 353
Hypercholesterolemia 100, 214, 326
Hyperinsulinemia 78
Hyperlipidemia: and adrenoceptor antagonists 439
Hypertension
and adrenoceptor antagonists 439
and carbohydrate metabolism 78
and 5-HT 424
and Na^+/Ca^{2+} metabolism 111
and K^+ channel openers 21
pregnancy-induced (preeclampsia) 455
spectral analysis 6
Hypertrichosis 26
Hypolipidemic drugs 327
Hypoxia 352 (Letter)

Ibuprofen
and emesis 338
and migraine 143
ICI 118551 211
ICI 174864 370
ICS 205-930 227, 338, 424
Idazoxan 274
Iloprost 73
Imazodan (CI-914) 167
Imidazoles 379
Imidazoquinolines 207
Immune response: and interleukin 1 172
Immunoglobulin E (IgE) receptors 67
Immunomodulatory drugs 446
Immunopharmacology 225
Inflammation
allergic 67
and interleukin 1 171
Influenza viruses 249
Inositol 1,4,5-trisphosphate 43
Insulin
and endothelium-dependent relaxation 183
processing 300
second messengers for 151
and secretion 21, 259
Insulin receptors
binding thermodynamics 408
genetic defects 98
substrates 63
Insulin resistance
and hypertension 78
and receptor defects 98
Insulin secretion 21, 441
Interleukin 1 (IL-1) 171
Interleukin 1 receptors 174
Interleukin 2 (IL-2) 226
Interleukin 6 (IL-6) 225
Intraocular pressure: and dopamine receptors 389
Intrinsic efficacy: of agonists 236
Ipratropium bromide 412
Ipsapirone 83
Irreversible inhibition: of radioligand binding 159
Ischemia 344
Isomazole (LY-175326) 169
Isothiocyanates 298
Isradipine (PN200 110) 26, 39

K^+ channels
and asthma 150
classification of 24–25 (table)
and 'inhibitory' receptors 271
pharmacology of 21
Kala-azar 376
Kallidin receptors 386
Kassinin 290
Ketanserin 92, 424
Ketoconazole 379
Kinin receptors (B_2) 387
Kurtosis 30

Lactate dehydrogenase virus 249
Leeches: hirudin 425
Leishmaniasis: chemotherapy 376
[Leu]enkephalin
binding thermodynamics 409
and emesis 336
and epilepsy 368
Leukotriene antagonists 189
Leukotrienes 72, 149
Levamisole 381
Ligand mimics 250
Ligands, radioactive *see* radioligands
Lipid profiles, plasma 439
Lipocortins 63, 226
Lipoprotein metabolism: and hypertension 78
Liposomes 377
Lithium: teratogenic effects 44
Lobenzarit 446
Local anesthetic (cocaine) 179
Lorazepam 361
Low-density lipoprotein (LDL) 214 and 235, 431 (Letters)
Low-density lipoprotein receptors: genetic defects 100
LS 2616 446
Luteinizing hormone (LH)
genetic defects of receptor function 100
and secretion 259
LY-53857 424
β-Lyase 297

Malaria: chloroquine resistance 241
Mania: and Ca^{2+} antagonists 118
Mannitol 417
Mass spectrometry 119
MDL 72222 143, 227, 338, 424
Mefloquine 242
Meglumine antimonate 376
Melanocyte-stimulating hormone 259
Memory
and ACTH(4–10) 230
and the amygdala 429
and shaking behavior 79
Mepacrine 242
6-Mercaptopurine 437
Methadone 374
Methoctramine 217, 413
Methotrexate 323
Methylbenzethonium chloride 378
α-Methyldopa 213
4-Methylhistamine 436
Methylmercury 59
Methylsalicylate 355
Methylxanthines 345
Methysergide
and 5-HT receptors 92, 424
and migraine 143
Metiamide 436
Metitepine 275
Metkephamid 369
Metoclopramide
and cancer therapy 270, 334
and migraine 143
Metoprolol
clinical trials 52
and migraine 143
Miconazole 380
Midazolam 361
Migraine 141
Milrinone 167 and 431 (Letter)
Minoxidil 26
Mitomycin 403
Mitoxantrone 446
MK-801 83
MNNG (*N*-methyl-*N'*-nitro-*N*-nitrosoguanidine) 296
Molecular dynamics 285
Molecular graphics 285
Molecular modelling 386
Monte Carlo simulation 285
Morphine 195, 198, 330
MPTP (1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine) 347, 453
Multidrug resistance: in cancer 54, 443
Murine leukemia virus 249
Muscarinic receptor antagonists 216
Muscarinic receptors
in airways 412
M_2 type 216
and phenylalkylamines 352 (Letter)
Muscle research: appropriate units 124 (Letter)
Myasthenia gravis: and receptor defects 98
Myocardial infarction
and β-blockers 52
and hypertension 78

Na^+–Ca^{2+} exchange 112, 343
Na^+/H^+ antiporter: and 'inhibitory' receptors 271
Na^+–H^+ exchange 345
Na^+/K^+-transporting ATPase 49, 112, 456
$Na^+/K^+/Cl^-$ co-transporter 416
Na^+ metabolism: and hypertension 111
Naloxone 127, 368, 409, 429
Naltrindole 310
2-Naphthylamine 322
Naproxen: and migraine 143
Natriuresis 312
Nausea 339
Nedocromil 67
Neomycin 327
Neuroimmunopharmacology 226
Neurokinin fragments 290
Neurokinin receptor agonists 290
Neurokinin receptors 3, 290
Neurokinins 290
see also substance P
Neuroleukin 248
Neuromedins (C, B, U): nomenclature 2
Neuromelanin 347
Neuromuscular junction 16 and 125, 200 (Letters)
and ACTH(4–10) 230
Neuropeptides *see* sensory neuropeptides
Neurotensin: and emesis 336
Neurotoxicity: role of Ca^{2+} 154
Neurotransmitters
release studies 83, 274
in the retina 80
studies on brain autopsy samples 232
Nialamide 350
Nicorandil 23
Nicotinic acetylcholine receptors 102, 315 (Letter)
Nifedipine 37
Nimodipine
anticonvulsant properties 117
and migraine 143
Nisoldipine 37

Nitrazepam 361
Nitrogen mustards 322
Nitroprusside 272
N-nitrosodimethylamine 322
Nitrovasodilator drugs 272
NMDA receptors 83, 193
Nootropic agents 15
Noradrenaline
  and adenosine 130
  in brain tissue 83, 274
  and preeclampsia 455
  in the retina 80
  as vasoconstrictor 72
Nor-binaltorphimine (nor-BNI) 310
Norepinephrine
  α-adrenoceptor affinity 87
  and cocaine 177
NSAIDs (non-steroidal anti-inflammatory drugs): and migraine 143
Nucleic acids, antisense: in drug design 45
Null method
  agonist action 395
  ALLFIT program 121
  receptor classification 202
Nystatin 380

Oligonucleotides, antisense: in drug design 45
Omeprazole 188
Oncogenes 322
Operational model
  agonist action 395
  receptor classification 202
Opiate receptors: binding thermodynamics 409
Opiates 330
  and migraine 143
Opioid anticonvulsant substance, endogenous (EAS) 366
Opioid peptides: and epilepsy 366
μ-Opioid receptor agonists: and asthma 150
Opioid receptor antagonists, selective 310
Opioid receptors
  and antinociception (δ and μ) 134
  and signal transduction 309
  subtypes 310
Opium 198
Organ transplantation: and immunomodulating drugs 446
Organogermanium compounds 450
Oscillations: in Ca^{2+} 43
Osmocides 353
Ototoxins 353
Ouabain 113
Oxamisole 446
Oxazepam 361
Oxygen radicals 324

P170 *see* P-glycoprotein
Papaver somniferum 198
Paracetamol
  kinetics 85
  and migraine 143
Parathyroid hormone (PTH) receptors: genetic defects 100
Parkinson's disease: and neuromelanin 347
Paromomycin 378
Peer review 234 (Letter)
Pentetrazole 362
s-Pentobarbital 373
Peptic ulcer disease 435
Peptidases: nomenclature 301
Peptide histidine isoleucine: and endothelium-dependent relaxation 183
Peptide hormones: regulation of 299
Pergolide 453
Permease: and chloroquine resistance 243
P-glycoprotein (P170): and drug resistance 54, 244, 443
Pharmacokinetics
  of alcohol 47
  of drug delivery 138
  use of programmable calculators 85
Pharmacological modelling 386, 395
Pharmacology: cardiovascular 6
Phenacetin 324
Phencyclidine 374
Phenobarbital 324, 362
Phenylalkylamines 10, 352 (Letters), 398
Phenytoin 362
Phorbol esters 325
Phosphatidylinositol (PI) turnover 214 and 431 (Letter), 272
Phosphodiesterase III inhibitors 166
Phosphoinositide hydrolysis 43
Phospholipase A_2 226
Phospholipase C 151
Physalaemin 290
R-PIA (R-N_6-phenylisopropyladenosine) 130, 345
Pilocarpine 414
Pimobendan (UD-CG 115) 169 and 431 (Letter)
Pinacidil 23
Piperoxane 350
Pirenzepine 412
Piroximone (MDL-19205) 167
Plasma lipid profiles 439
Platelet-activating factor (PAF) 69, 149
Platelet-derived growth factor (PDGF) 70, 97, 427
Platelet-derived growth factor receptors: substrates 63
Platelets 66 and 314 (Letter)
PN200 110 (isradipine) 26, 39
PNMT (phenylethanolamine-*N*-methyl transferase) 210
Poison ivy (*Toxicodendron* sp.) 49
Polymethylene tetramines 216
Pore-forming proteins 195
Post-mortem tissue, human: and neurotransmitters 84, 232, 349
Potassium *see* K^+
Pravastin 328
Prazosin 87, 275, 357
Preeclampsia 455
Primidone 362
Progesterone receptors: genetic defects 99
Prolactin 259, 271
Propranolol
  and adrenaline 211
  in the amygdala 429
  discovery 435
  immunoassay for 374
  and migraine 143
Prostaglandins (PGs)
  as anti-ulcer drugs 188
  and asthma 149
  as vasoconstrictors 72
Protein kinases C
  and adenosine receptors 132
  in exocytosis 196
  and insulin 151
  isoforms 44, 114, 226
  and tumor promotion 324
Protein tyrosine kinase substrates 63
Pseudohypoparathyroidism: and receptor defects 99
Pseudo-one-pulse stimulation 275
Psychopharmacology 269
Purinergic transmission 116
Purinoceptors (P_2) (ATP receptors) 116
Pyrimethamine 438
Pyroglutamate 278, 430 (Letters)

Quinine 242
Quinones
  and DNA damage 324
  glutathione conjugation 297
Quinoxalines 207
Quinuclidinyl benzilate 412
Quipazine 228

Rabies virus 249
Racemates *see* chirality
Radioligands 159 and 316 (Letter), 261, 393 (Letter)
Radiotherapy: and emesis 334
Rasputin: and cyanide 276
Rauwolscine 274, 350, 359
Receptors
  classification 202, 385
  desensitization 393 (Letter)
  genetic defects 98
  kinetics 315 (Letter)
  mapping 391
  mimics 251
  reserve 236
  see also named entries
Reductase inhibitors 328
Renin 259
Renin–angiotensin system 111
Reovirus 3 249
Retina, isolated: as model CNS tissue 80
Retinitis pigmentosa: and basic fibroblast growth factor (bFGF) 428
Rheumatoid arthritis: and immunomodulating drugs 446
Risk assessment 59
Ritanserin 269, 424
Ro 15-1788 (flumazepil) 153
Ro 16-6028 363
RU-24969 350

Salbutamol 149
Salmeterol 150
SCH 23390 233, 453
Schizophrenia
  and Ca^{2+} antagonists 118
  and 5-HT_3 antagonists 271
Scopolamine 353
Scorpion venom 103
Secretion: and Ca^{2+} agonists 259
Seizures
  c-fos protein induced 5
  see also epilepsy
Semliki forest virus 249
Sensory neuropeptides 149
Serotonin *see* 5-HT
Shaking behavior: and memories 79
Signal transduction: and opioid receptors 309
Signalling, intracellular
  compartmentalization 44
  and protein kinases C 44, 114
  temporal aspects 43
  see also co-transmission
SK&F-104078 360
Skewness (of data) 30
Smooth muscle cells, vascular: proliferation 94
Sodium *see* Na^+
Sodium stibogluconate 376
Somatostatin 271
Somatostatin receptor agonists 189
Spectral analysis: hemodynamic fluctuations 6
Spiperone 283
Spirogermanium 450
Staphylococcus aureus: α-toxin 195
Statistical analysis 29
  see also geometric mean, *t*-tests
Stereoisomerism *see* chirality
Stimulus–secretion coupling: in chromaffin cells 103
Streptokinase: intra-arterial delivery 139
Streptolysin O 195
Structure–activity relationships
  of dopaminergic drugs 282
  three-dimensional 285
Substance P
  and emesis 336
  and endothelium-dependent responses 184, 273
  and migraine 142
  processing of 300
  and secretion 259
Substance P receptor agonists 290

Suicide 269
Sulfamethizole 255
Sulfonamides 252
Sulfonylureas 344
Sulmazole (AR-L 115) 168 and 431 (Letter)
Sulpiride 275
Systemic lupus erythematosus:
and immunomodulating drugs 446

T cells 226
T lymphocytes 225
t-tests 12 (Letter)
Tachykinin receptor agonists 290
Tachykinin receptors 3, 290
Tachykinins 290
Taurine 80
Taxines 353
TCDD (2,3,7,8-tetrachlorodibenzo-*p*-dioxin) 324
Teratogens
lithium 44
terminology 13
Teratology, behavioral 13
Terbinafine 379
Testosterone receptors: genetic defects 99
Tetanic fade 16 and 125 (Letter), 200
Tetrodotoxin 103
Thanatomimetics 353
Theophylline 153, 193
Thrombi 122
Thrombin 425
Thrombolytic therapy, intra-arterial 139
Thrombospondin 97
Thromboxane A_2 (TXA_2) 72, 314 (Letter)
Thyroid hormones 33
Thyrotropin (TSH) receptors: genetic defects 99
TNO_6 337
Tolbutamide 22
Tolerance: of benzodiazepines 361
Toxicity, behavioral 59
Toxicodendron sp. (poison ivy) 49
α-Toxin (*Staphylococcus aureus*) 195
for other α-toxins see under named entries
TPA (12-*O*-tetradecanoylphorbol-13-acetate): and cancer 206
Transferrin: and endocytosis 190
Transferrin receptors: genetic defects 98
Transforming growth factor (TGF) 427
Transforming growth factor β (TGF-β) 314 (Letter)
Trehalose dimycolate 381
Triamterene 417
Triazolam 153
Triiodothyronine (T_3) 318
Triiodothyronine (T_3) receptors: genetic defects 99
Trimelamol 337
Trimethoprim 285
Tryptophan hydroxylase (TrH) 349
Tubocurarine 16, 125 (Letter), 200
Tumor promoters 205, 324
Tyrosine hydroxylase (TH) 349
Tyrosine kinase 152

U-50488 369
Units: used in muscle research 124 (Letter)
Urushiol (3-*n*-alkylcatechols) 49

Vaccina virus 249
Valproate 127, 362
Vascular endothelium, human 181
Vascular smooth muscle cells: proliferation 94
Vasoactive intestinal peptide 183
Vasodilators 23, 417
Vasopressin
and endothelium-dependent relaxation 181
and nausea 339
Vasopressin receptors: genetic defects 100
Verapamil
anticonvulsant properties 117
enantiomers 235, 352
and multidrug resistance reversal 55, 244
Veratridine 102
Vesicular stomatitis virus 249
Vinblastine 54, 244
Vincristine 54
Viral attachment protein 247
Vitamin D 112
Vitamin D receptors: genetic defects 99

Warfarin
immunoassay for 374
and venous thrombi 122
Wound healing: and basic fibroblast growth factor (bFGF) 428
WR6026 380

X*enopus laevis* oocytes: $5\text{-}HT_{1c}$ receptors 91

Yawning 119
YC 170 257
Yohimbine 357

Zacopride 228
Zidovudine (AZT) 435